

Application No. 09/939,509
Amendment dated May 4, 2006
Reply to Office Action of January 4, 2006

PATENT

REMARKS

This Amendment is filed in response to the outstanding Office Action, dated January 4, 2006. Reconsideration of the application, as amended, is respectfully requested.

PARAGRAPH 2

Applicants appreciate the Examiner's withdrawal of his earlier rejections under 35 U.S.C. § 251.

PARAGRAPH 4

The Examiner has rejected Claims 22, 36 through 38, 40, and 42 through 47 under 35 U.S.C. § 103(a) as being unpatentable U.S. Patent No. 5,496,099 to Resch (Resch '099) in view of U.S. Patent No. 4,143, 514 to Leiber (Leiber '514) and U.S. Patent No. 5,261,730 to Steiner et al. (Steiner '730) or U.S. Patent No. 5,123,713 to Steiner (Steiner '713). Applicants respectfully disagree.

Resch '099

Resch '099 discloses a hydraulic dual-circuit brake system with a panic brake assist feature (ref. Col. 1, lines 28-35). Resch '099 teaches a master cylinder 18 provided with a vacuum booster 17 which booster can be electronically controlled by operation of valves 41 and 42. The valves 41 and 42 respond an electronic control unit 22, when operation of the booster without operation of the brake pedal is desired. The Examiner has referenced a section of column 17 of Resch '099 (referring to the section on "Automatic activation of a rear-wheel brake",) to advance the proposition that the pump may be used as a brake pressure source, referring to ABS pump (recirculating pump 127). During normal driver-induced manual braking, however, the booster 17 operates like a conventional vacuum booster; with a control part 29 actuatable by the brake pedal 16 (see Col. 8, line 23 to Col. 9, line 9). In normal manual braking, pressurized hydraulic fluid is supplied from the master cylinder 18

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directly to the rear brakes 13 and 14, with all valves between the rear brakes 13 and 14 and the master cylinder remaining open, contrary to the limitation of Claim 22. When no braking is demanded, apply valves 113 and 114 associated with brakes 13 and 14, respectively, remain open to provide communication between the normal source (master cylinder 18) and the wheel brakes 13 and 14, contrary to the limitations of Claim 25. Since, as indicated above, during normal manual braking, pressurized hydraulic fluid is supplied from the master cylinder 18 directly to the rear brakes 13 and 14, it is clear that the master cylinder 18 is the normal source of pressurized hydraulic brake fluid, and not a backup source, contrary to the limitations of Claims 22, 25, 36, 37, and 38. Resch '099 teaches only a pedal position sensor 21 for determining a brake demand signal, contrary to the limitations of Claims 42-47. Furthermore, since the normal source of hydraulic pressure of Resch '099 is the vacuum booster 17 which is directly actuated by the brake pedal 16, there is no need or motivation to add the additional expensive sensors of Steiner '730 to achieve a brake demand signal based on blending a brake pedal position signal and a pressure signal, absent a desire to pick and choose components from various references to arrive at Applicant's claimed invention, absent the impermissible use of hindsight after having reviewed Applicant's claims. Accordingly, withdrawal of the rejections of Claims 22, 36-38, 40, and 42-47 is requested.

Leiber '514

Leiber '514 teaches a master cylinder with a hydraulic booster (as opposed to a vacuum booster as in Resch '099). The hydraulic booster includes a pump 7 that pumps fluid from the reservoir 4 into an intermediate chamber 16 in the master cylinder. A boost valve 12 is operated by the brake pedal to vary the pressure of hydraulic brake fluid applied to the master cylinder secondary piston 24, driving the master cylinder to supply hydraulic brake fluid to the second brake circuit 25 (and thence, via valves 41 and 42 and conduits 26 and 27 to the brakes on the secondary brake circuit. Similar to the vacuum booster driven master cylinder of Resch '099,

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above, during normal manual braking, pressurized hydraulic fluid is supplied from the master cylinder directly to the brakes, and it is similarly clear that the master cylinder of Leiber '514 is the normal source of pressurized hydraulic brake fluid, and not a backup source, contrary to the limitations of Claims 22, 25, 36, 37, and 38. Leiber '514 does not illustrate the entire vehicle brake circuits and thus cannot teach or suggest the limitations on valve positions contained in Claims 23 and 25. There is no teaching of blending a brake pedal position signal and a pressure signal to derive a brake demand signal, contrary to the limitations of Claims 42-47. Furthermore, similar to Resch '099, since the normal source of hydraulic pressure of is the hydraulic booster (7,12) which is directly actuated by the brake pedal 1, there is no need or motivation to add the additional expensive sensors of Steiner '730 to achieve a brake demand signal based on blending a brake pedal position signal and a pressure signal, absent a desire to pick and choose components from various references to arrive at Applicant's claimed invention, absent the impermissible use of hindsight after having reviewed Applicant's claims. Accordingly, withdrawal of the rejections of Claims 22, 36-38, 40, and 42-47 is requested.

CONCLUSION

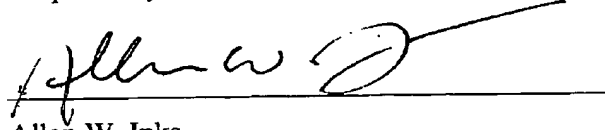
It is believed that Claims 1 through 20 and 22 through 47 are in condition for allowance. Return of the original copy of the patent will occur when Applicants' attorney is notified that all claims are allowed, and no other issues remain to be resolved.

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Reconsideration and allowance of this application is respectfully requested in light of the preceding remarks.

Respectfully submitted,



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